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U. S. DEPARTMENT OF AGRICULTURE,  
BUREAU OF PLANT INDUSTRY,  
OFFICE OF GRAIN STANDARDIZATION.

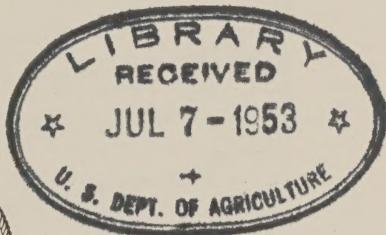
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## A SERIES OF DIAGRAMS

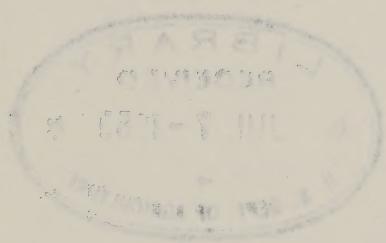
WHICH SHOW GRAPHICALLY THE MONTHLY AVERAGES AND THE  
VARIATION OF THE MORE IMPORTANT FACTORS WHICH ARE  
TAKEN INTO CONSIDERATION IN THE GRADING OF COM-  
MERCIAL CORN. THESE DIAGRAMS ARE BASED ON  
THE ANALYSES OF SAMPLES REPRESENTING  
THE RECEIPTS AT TERMINAL MARKETS  
AND SHIPMENTS FROM COUNTRY  
ELEVATORS COVERING A  
PERIOD MAINLY FROM  
OCTOBER, 1909, TO MAY, 1913, INCLUSIVE

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Approved:  
W. A. TAYLOR, *Chief of Bureau*  
OCTOBER 9, 1913



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1913.



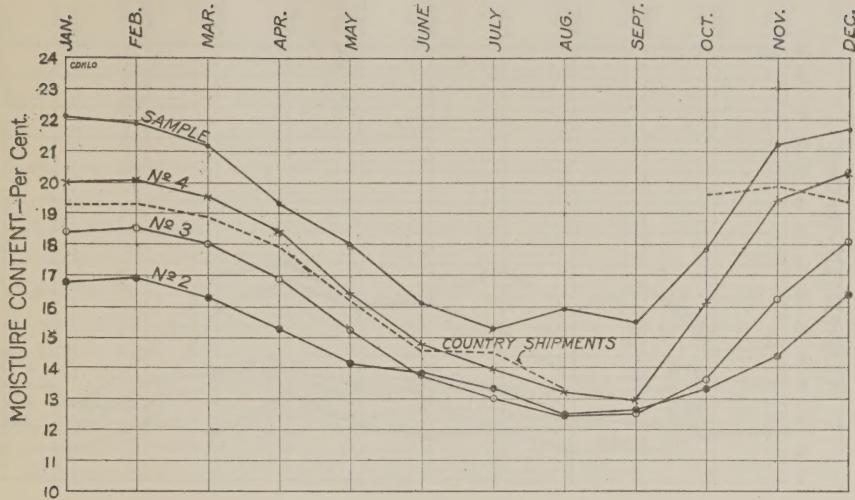


Fig. 1.—Monthly average percentages of moisture in No. 2, No. 3, No. 4, and "Sample" corn as received at terminal markets and as shipped from country stations in central Illinois.

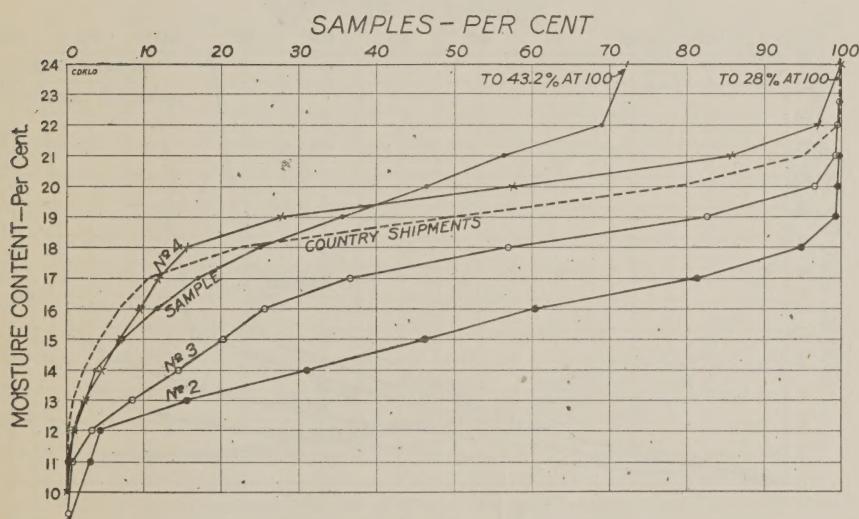


Fig. 2.—Variation in the percentages of moisture in the different grades of corn as received at terminal markets and in corn as shipped from country stations in central Illinois.

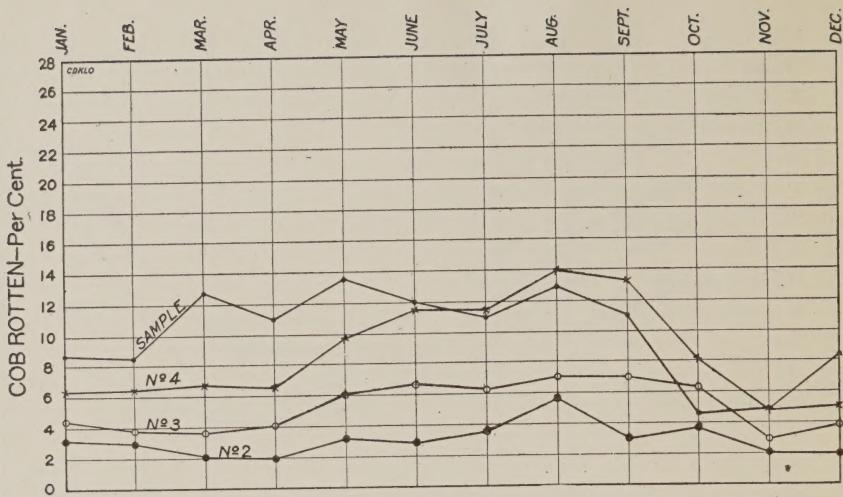


Fig. 3.—Monthly average percentages of "cob rotten" in No. 2, No. 3, No. 4, and "Sample" corn as received at terminal markets.

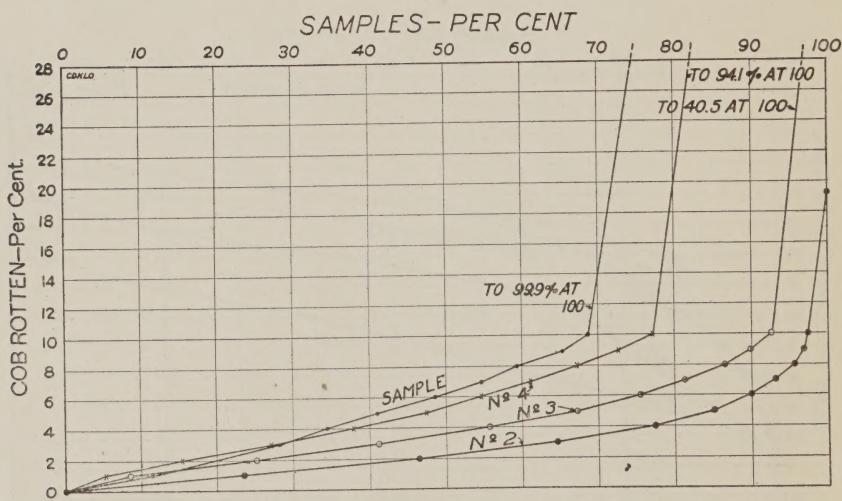


Fig. 4.—Variation in the percentages of "cob rotten" in the different grades of corn as received at terminal markets.

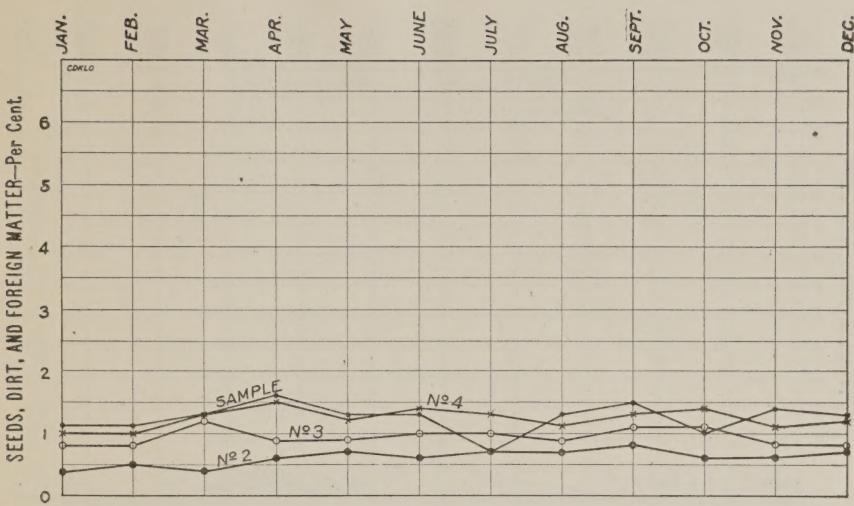


Fig. 5.—Monthly average percentages of seeds, dirt, and foreign material in No. 2, No. 3, No. 4, and "Sample" corn as received at terminal markets.

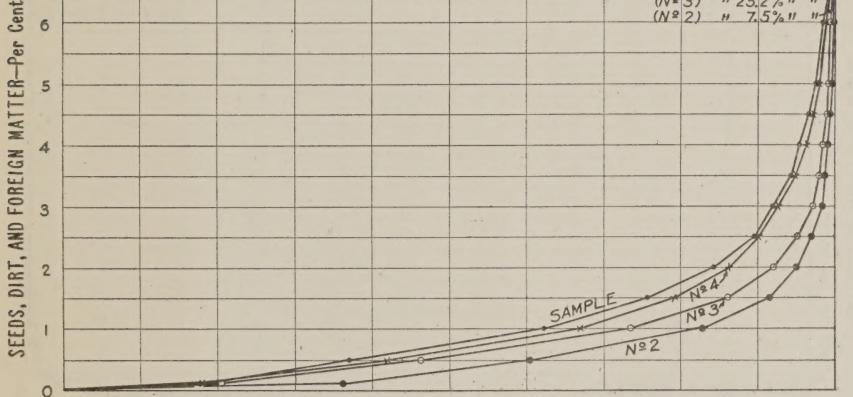


Fig. 6.—Variation in the percentages of seeds, dirt, and foreign material in the different grades of corn as received at terminal markets.

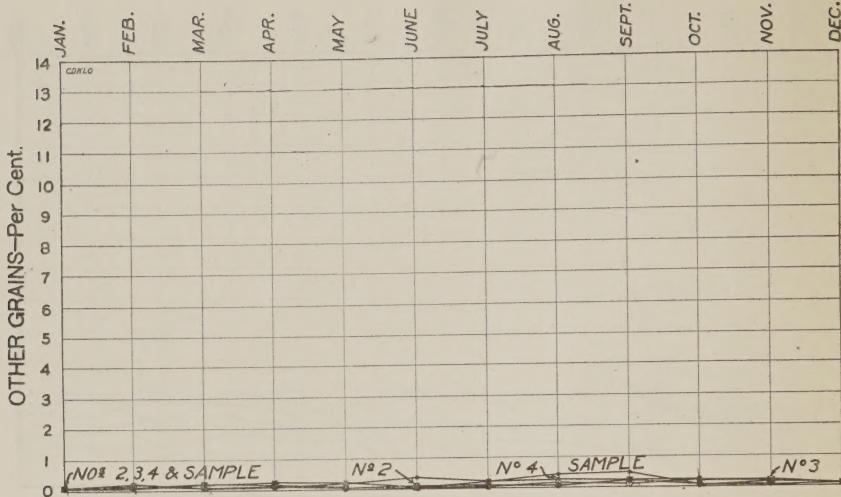


Fig. 7.—Monthly average percentages of other grains in No. 2, No. 3, No. 4, and "Sample" corn as received at terminal markets.

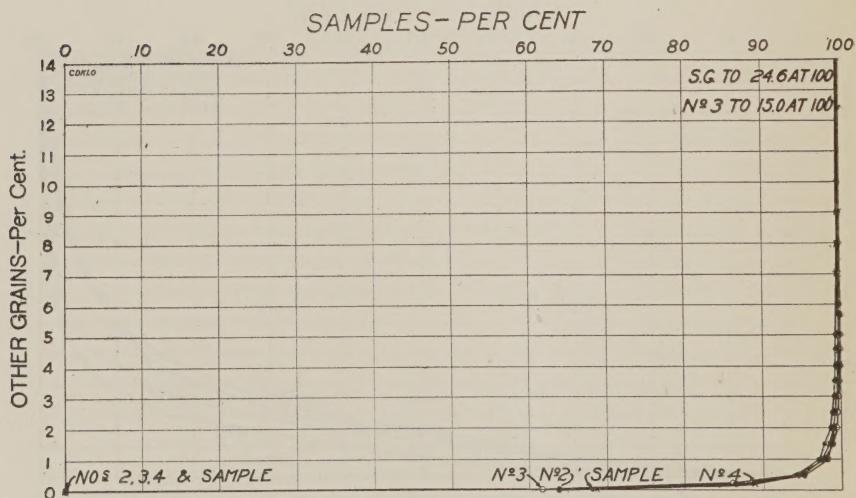


Fig. 8.—Variation in the percentages of other grains in the different grades of corn as received at terminal markets.

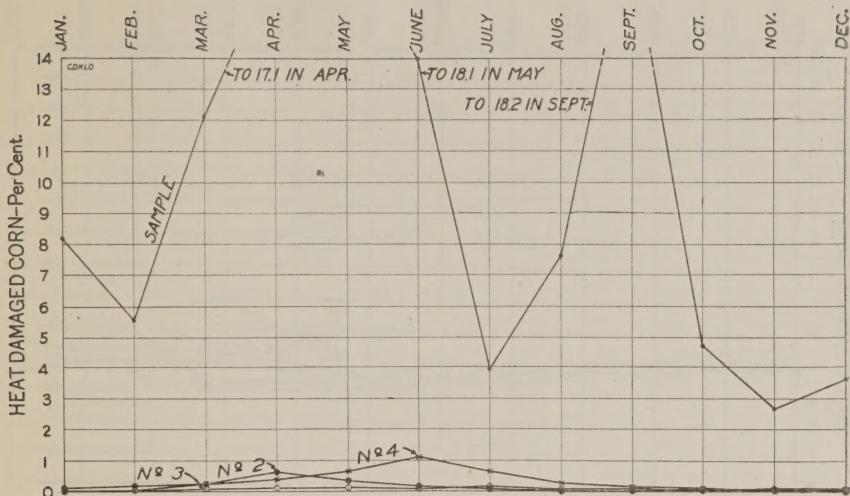


Fig. 9.—Monthly average percentages of "heat damaged" corn in No. 2, No. 3, No. 4, and "Sample" grades as received at terminal markets.

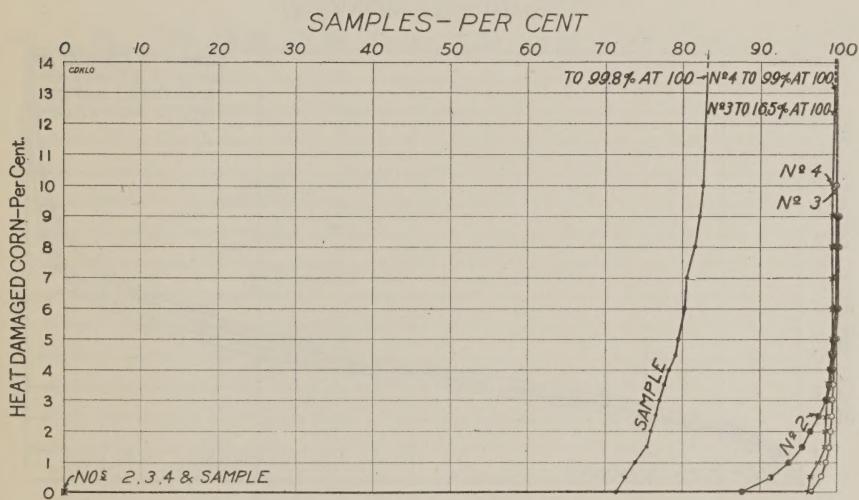


Fig. 10.—Variation in the percentages of "heat damaged" corn in the different grades as received at terminal markets.

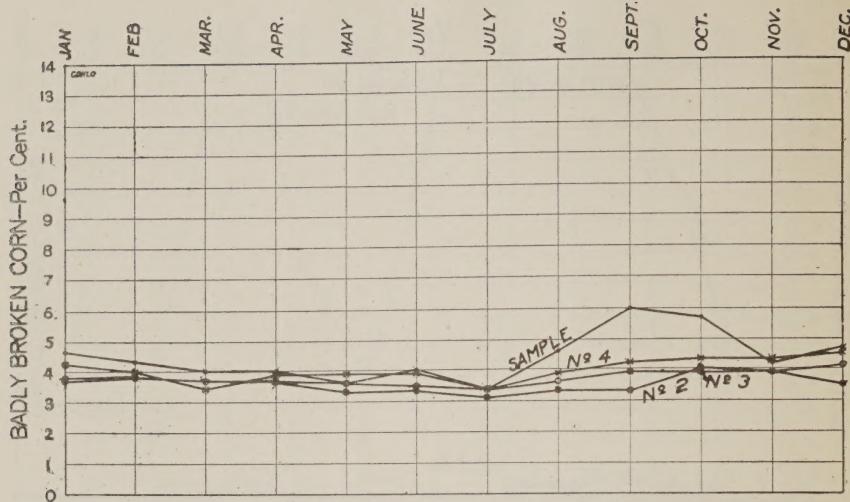


Fig. 11.—Monthly average percentages of badly broken corn in No. 2, No. 3, No. 4, and "Sample" grade as received at terminal markets.

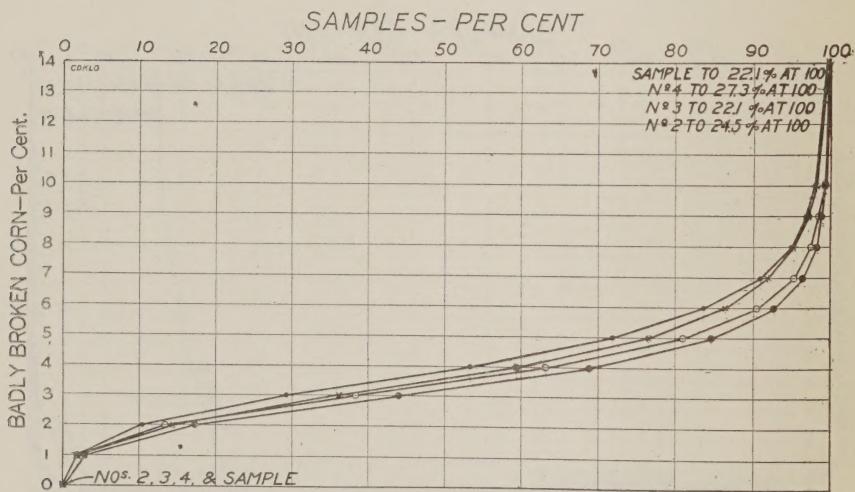


Fig. 12.—Variation in the percentage of badly broken corn in the different grades as received at terminal markets.

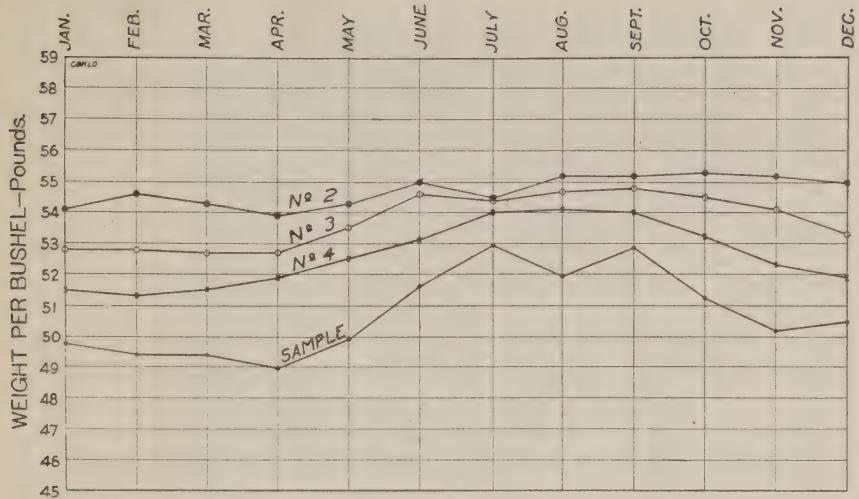


Fig. 13.—Monthly average weight per bushel of No. 2, No. 3, No. 4, and "Sample" corn as received at terminal markets.

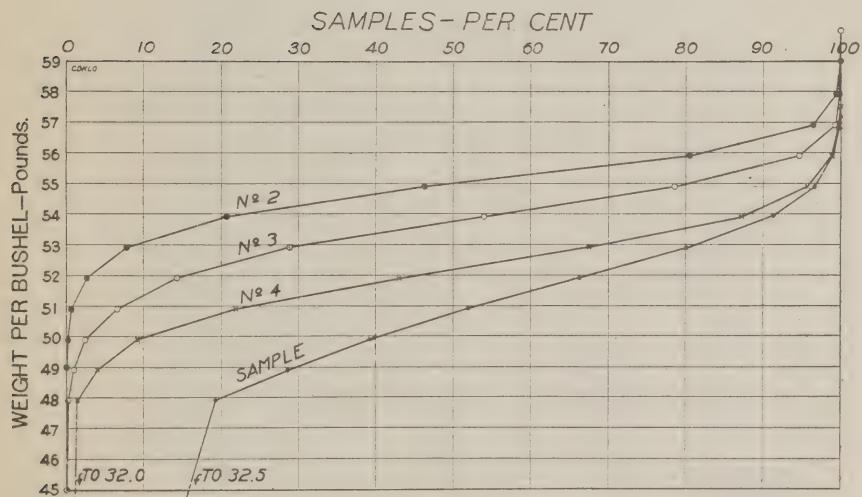


Fig. 14.—Variation in the weight per bushel of the different grades of corn as received in the terminal markets.

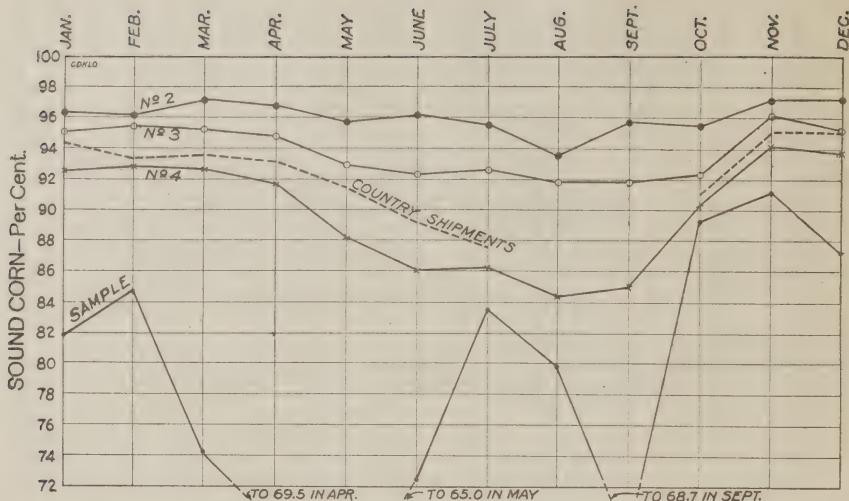


Fig. 15.—Monthly average percentages of sound corn in No. 2, No. 3, No. 4, and "Sample" grades as received at terminal markets and in corn shipped from country stations in central Illinois.

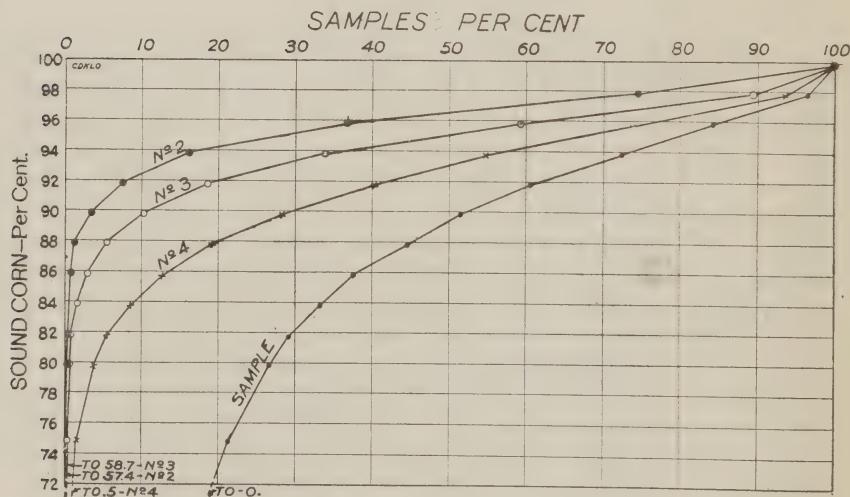


Fig. 16.—Variation in the percentages of sound corn in the different commercial grades as received at terminal markets.

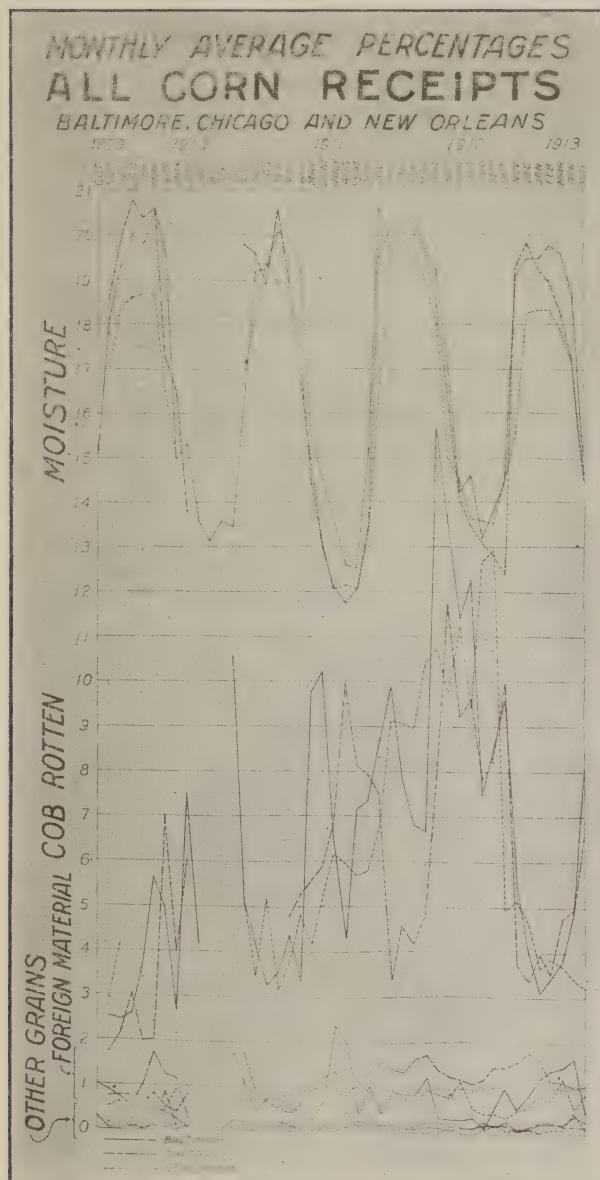


Fig. 17.—Monthly average percentages of moisture, cob rot'ten, foreign material, and other grains in all grades of corn as received at Baltimore, Chicago, and New Orleans, these being three of the large markets drawing corn mainly from the central part of the corn belt.

$\psi(1, \omega^2)$  is 1

$$T^{(0)} = \frac{1}{2} \left( \frac{\partial \psi}{\partial x} \right)^2 + \frac{1}{2} \left( \frac{\partial \psi}{\partial y} \right)^2$$

$$= \frac{1}{2} \left( \frac{\partial}{\partial x} \left( \frac{\partial \psi}{\partial x} \right) + \frac{\partial}{\partial y} \left( \frac{\partial \psi}{\partial y} \right) \right)$$

